

CLAIMS

1. A peak power suppressing apparatus comprising:
a suppression section that suppresses peak power
5 of a transmission signal based on a predetermined suppression coefficient;
a limiting section that limits a band of the transmission signal in which peak power has been suppressed by said suppression section;
10 a detection section that detects input power of the transmission signal inputted to said suppression section and output power of the transmission signal outputted from said limiting section respectively;
a calculation section that calculates an amount of
15 change of the suppression coefficient based on the detected input power and output power; and
a change section that changes the suppression coefficient based on the calculated amount of change.
- 20 2. The peak power suppressing apparatus according to claim 1, wherein said calculation section comprises a state value calculation section that calculates a numerical value indicating at least any one of an insufficient state and excessive state of peak power
25 suppression by said suppression section based on the detected input power and output power, and calculates the amount of change of the suppression coefficient based

on the calculated numerical value.

3. The peak power suppressing apparatus according to claim 2, wherein said state value calculation section
5 calculates the numerical value by carrying out predetermined linear approximation on the detected input power and output power.

4. The peak power suppressing apparatus according to
10 claim 2, wherein:

said calculation section comprises a decision section that decides whether or not the detected input power is within a predetermined range; and

said state value calculation section calculates the
15 numerical value based on input power within the range and output power corresponding to the input power out of the detected input power and output power.

5. The peak power suppressing apparatus according to
20 claim 1, wherein said change section comprises an update section that updates the suppression coefficient based on the calculated amount of change.

6. The peak power suppressing apparatus according to
25 claim 1, further comprising a modulation section that has a variable input/output power characteristic,

wherein said change section comprises a storage

section that stores suppression coefficients corresponding to the input/output power characteristic as a coefficient table, and, when the input/output power characteristic of said modulation section is switched,
5 changes the suppression coefficient based on the coefficient table stored in said storage section.

7. The peak power suppressing apparatus according to claim 1, wherein:

10 said limiting section has a variable input/output power characteristic, and

said change section comprises a storage section that stores suppression coefficients corresponding to the input/output power characteristic as a coefficient table,
15 and, when the input/output power characteristic of said limiting section is switched, changes the suppression coefficient based on the coefficient table stored in said storage section.

20 8. The peak power suppressing apparatus according to claim 1, wherein said change section comprises a reception section that receives a stop signal indicating stop of calculation of the amount of change, and stops calculating the amount of change when the stop signal is received.

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9. The peak power suppressing apparatus according to claim 1, further comprising:

a stability detection section that detects that the calculated amount of change is stable at a lower level than a predetermined level; and

5 a transmission section that, when the calculated amount of change is detected to be stable, transmits the stop signal to said reception section.

10. A radio transmission apparatus comprising the peak power suppressing apparatus according to claim 1.

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11. A peak power suppressing method comprising:

a suppression step of suppressing peak power of a transmission signal based on a predetermined suppression coefficient;

15 a limiting step of limiting a band of the transmission signal the peak power of which has been suppressed in said suppression step;

a detection step of detecting input power of the transmission signal before the peak power is suppressed
20 in said suppression step and output power of the transmission signal after the band is limited in said limiting step respectively;

a calculation step of calculating the amount of change of the suppression coefficient based on the input
25 power and output power detected in said detection step; and

a changing step of changing the suppression

coefficient based on the amount of change calculated in said calculation step.